

REMARKS

In the Office Action mailed June 8, 2004, the examiner set forth a requirement for election of species under 35 USC 121, noting the presence of eight different embodiments depicted respectively in FIGS. 4, 6, 7, 8, 9, 11, 13, and 15 of the drawings.

In addition, pursuant to a provisional telephone election of Species 1 (FIGS. 3-4), the examiner rejected claims 1-3, 6-9, 14-16 and 18-26 for alleged obviousness under 35 USC 103 in view of cited prior references. Claims 2-3 were additionally rejected for alleged indefiniteness under 35 USC 112. Claims 4-5, 10-13 and 27-29 were indicated as withdrawn for reading upon nonelected species. Claim 17 was indicated to recite allowable subject matter.

In response, applicant respectfully resubmits independent claims 1, 20 and 21 without revision, for reconsideration and allowance. Original dependent claim 2 has been canceled, and related dependent claim 3 has been edited to resolve any remaining issue under Section 112.

As now presented, claims 1, 3, 6-9 and 14-26 are respectfully submitted to distinguish clearly and patentably from the cited art, particularly for the reasons noted in the following remarks.

The Restriction Requirement

In the Office Action, the examiner noted the presence of eight embodiments or species as shown in FIGS. 4, 6, 7, 8, 9, 11, 13, and 15, respectively. The restriction requirement mandates applicant's election of one of these embodiments for examination on the merits. By telephone election, applicant's counsel provisionally elected the embodiment of FIG. 4 (Species 1), noting that claims 1-3, 6-9 and 14-26 are readable on this elected species (or are generic). Claims 4-5, 10-13 and 27-29 stand withdrawn.

Applicant hereby affirms this election, without traverse. Applicant reserves the right to file one or more timely divisional applications for the purposes of pursuing claims directed to the nonelected species.

Rejection Under 35 USC 112

In the Office Action, claims 2-3 were rejected under Section 112, first paragraph.

In response, claim 2 has been canceled. Claim 3 has been amended for proper dependency from claim 1, and further to incorporate some of the language from now-canceled claim 2. As now presented, claim 3 clearly recites an arrangement disclosed in the Specification, and is thus submitted as clearly overcoming the rejection under Section 112.

Discussion of Applicant's Invention

The present invention pertains to a temporary connection for coupling a golf club shaft with another club component, such as a golf club head and/or a golf club hand grip segment. Applicant's "temporary" connection is intentionally designed for quick and easy club component interconnection in a secure and stable manner to enable a golfer to use and test the assembled golf club during actual golf playing conditions. Moreover, applicant's "temporary" connection intentionally permits the assembled golf club components to be disassembled quickly and easily, thereby enabling the golfer to play-test multiple club component combinations in a short period of time. With applicant's system using the temporary connection as claimed, a golfer may thus arrive quickly at a customized golf club having a substantially optimized combination of individually chosen components uniquely suited to that particular golfer.

A major problem encountered by prior temporary golf club shaft-component connection structures relates to the provision of a sufficiently strong, sturdy and stable, substantially wobble-free or vibration-free component interconnection capable of withstanding the high stresses and high forces encountered during actual golf playing conditions, while additionally providing for quick and easy component disassembly. That is, high stresses and high twisting torques are encountered in the process of whipping the club shaft to swing the club head into impact engagement with a golf ball. High shock forces are encountered upon club head impact with the golf ball, and also in the event of club head contact with the ground. If the golfer senses any freedom of movement or wobble or vibration between the connected components, the golfer

is likely to be dissatisfied with the golf club. The slightest movement between the temporarily coupled golf club components can alter the performance characteristics of the assembled golf club in an unknown or unpredictable manner, and may also cause the assembled components to jam or bind thereby preventing quick and easy component disassembly.

Applicant's invention overcomes these problems and disadvantages. Applicant has provided a temporary shaft-component connection that is extremely strong, stable and wobble-free, yet is adapted for quick and easy assembly and disassembly.

Independent claims 1, 20 and 21 of the application recite applicant's temporary shaft-component connection to include an "elongated adapter insert" (emphasis added) for slide-fit reception into an "adapter socket", and wherein the "adapter insert and socket" have "interengaging surfaces for substantially preventing relative rotation therebetween". In addition, the "elongated adapter insert" is securely connected or anchored relative to the "adapter socket" by two separate "connection means" that are "spaced axially" from each other, *i.e.*, are located in the preferred illustrative embodiments at opposite ends of the elongated adapter insert.

More particularly, a "thrust flange" on the adapter insert (claims 1 and 20) or shaft (claim 21) is provided for seating onto a "thrust seat" on the adapter socket. A "first connection means" such as a compression nut (claims 7, 20 and 23) is provided "for removably interconnecting" (emphasis added) the adapter insert and socket by axially retaining the thrust flange on the thrust seat. As noted above, in the preferred illustrative embodiments of the invention, the "first connection means" and the associated "thrust flange" and "thrust seat" are positioned generally at one end of the elongated adapter insert.

Applicant additionally provides a "second connection means including a resilient anchor member" that is "interposed between" the adapter insert and socket "at a position spaced axially from said thrust flange and said thrust seat" (emphasis added), wherein this anchor member is "at least partially compressed" upon thrust flange engagement with the thrust seat. As shown in the preferred illustrative embodiments of the invention, this "second connection means" is positioned generally at an opposite end of the elongated adapter insert, *i.e.*,

“axially spaced” a substantial distance from the “thrust flange” and associated “thrust seat”.

With this construction, applicant’s “elongated adapter insert” comprises an elongated beam that is structurally supported by an axially spaced-apart two-point connection, resulting in an extremely strong and stable mechanical interconnection that can resist high stresses and high torques without wobble, without relative movement on ball impact, and without jamming or binding of the components.

The prior art cited by the examiner in the Office Action does not provide this important axially spaced-apart mechanical two-point beam support, particularly in a temporary, *i.e.*, removable shaft-component golf club connection structure. To the contrary, the cited art represents a commingled combination of temporary and non-temporary (permanent) shaft-component connections wherein the only disclosed “resilient” member is NOT “spaced axially” from any other connection means. Indeed, precisely to the contrary, the “block 84” in the cited Desbiolles reference (to be discussed herein in more detail) is deliberately positioned in direct axially adjoining relation (*i.e.*, it is NOT “spaced axially”) to a permanent (*i.e.*, NOT temporary) glue joint.

Applicant also notes the “backstop reaction member” recited in dependent claims 9 and 25. Notwithstanding the examiner’s reliance upon the cited Parsick reference (also to be discussed in more detail herein), the cited art does not disclose or suggest any connection structure wherein a back-rotated compression nut will engage a “backstop reaction member” for purposes of axially forcing the assembled components to separate.

Accordingly, applicant respectfully submits claims 1, 3, 6-9 and 14-26 for reconsideration and allowance.

The Cited References

In the Office Action, the examiner has rejected applicant’s independent claims 1, 20 and 21 for alleged obviousness under 35 USC 103, with primary reliance upon an asserted combination of Palmer, U.S. Patent 4,664,382 and Desbiolles, U.S. Patent 5,275,408.

The Palmer reference discloses a compact and portable set of golf clubs wherein a single upper club shaft component 39 including a hand grip is "removably joined" by a "coupler member 40" to one of multiple lower shaft sections 38 each including a different club head 47. During a round of golf, Palmer's upper shaft component 39 is intended for assembly with a selected lower section 38 having a selected club head 47 for each golf shot in succession.

Palmer's "coupler member" comprises an extension 43 on the upper shaft component 39 for slide-fit into a sleeve 44 on the selected lower shaft section 38. Teeth 45 on the upper component 39 engage grooves 46 on the lower shaft section 38 to prevent relative rotation or twisting movement. A threaded cap 41 on the upper component 39 engages a male thread 42 on the lower section 38 to lock the components together yet permit rapid detachment.

Palmer's "coupler member 40" thus comprises a standard one-point connection between the upper component 39 and the lower section 38. That is, while Palmer's "extension 43" slidably fits into the "sleeve 44", actual locked interconnection of these structures occurs at one location only, namely, the threaded interconnection of the cap 41 with the male thread 42 to retain the teeth 45 seated upon and engaged with the grooves 46. This connection structure is located substantially at the open upper end of the lower section 38, and substantially at an upper end of the "extension 43". Palmer's "extension 43" projects or penetrates from this thread-on connection site a substantial distance into the mated "sleeve 44", but there is no other connection structure located along the axial elongated length of the "extension 43", and specifically there is no connection structure to constrain the lower distal or free end of the "extension 43". Accordingly, Palmer does not provide any structure or means for locking the "extension 43" against wobble or rotation relative to the "sleeve 44" at a second location spaced axially from the single threaded interconnection 41, 42.

Persons skilled in the art will readily recognize and appreciate that Palmer's single-point connection does not and cannot constrain the distal or free end of the "extension 43" against undesirable movements within the "sleeve 44" during use of the assembled golf club. While one might desire these components to be manufactured with close tolerances to minimize such undesirable movements, persons skilled in the art will also understand that

Palmer does not and cannot prevent such motions. From a production standpoint, it is simply not possible to construct every club with “zero” tolerance between the outer diameter size of the unconstrained distal end of the “extension 43” and the inner diameter size of the “sleeve 44”. Indeed, minor tolerance deviations sufficient to create component wobble between these components during a golf shot will occur naturally from mere temperature fluctuations. By tactile sensation, a golfer can detect relative movements or looseness in the golf club of infinitesimally small magnitude. In the sport of golf, ANY relative looseness in the golf club is extremely undesirable, since it can result in unpredictable club performance and thereby destroys golfer confidence in that club.

The foregoing deficiencies of the Palmer reference have been acknowledged by the examiner (Office Action, p. 5). However, the examiner contends that a person skilled in the art would find it obvious to modify Palmer’s connection scheme to incorporate a “block 84” of “compressible and possibly elastic material” from the permanent (*i.e.*, NOT temporary) club shaft-head connection disclosed in the cited Desbiolles reference. Simply stated, applicant does not agree.

Applicant respectfully contends that a person skilled in the art would find no reason or suggestion from the Palmer and Desbiolles references to install Desbiolles’ “block 84” into Palmer’s structure. Moreover, a person skilled in the art would not see, from the references themselves, how to do it, or even why. Applicant respectfully suggests that the teachings present in applicant’s own Specification are essential for the person skilled in the art so see how or why the Palmer and Desbiolles references might be modified to yield applicant’s claimed invention. Such is the hallmark of an improper obviousness rejection based upon a hindsight analysis.

The Desbiolles reference relates to several embodiments for permanently connecting a golf club shaft onto a club head in a way that accommodates post-connection bending of the joint to adjust the club head lie angle, while reducing the risk of fracturing the metal components. Each embodiment in Desbiolles contemplates a club shaft having a lower end that is permanently connected with or attached to a club head neck by means of “gluing” or the like. Per his

invention, Desbiolles glues the club shaft to the club head neck in a manner providing space or clearance between a lower end of the shaft and a rigid part 24 of the club head. Desbiolles' concept is to provide an essentially unconnected region having a length (d) over which subsequent bending stresses are distributed thus making the joint less susceptible to breakage during lie angle adjustment.

In his FIG. 10, Desbiolles discloses one alternative embodiment wherein a lower end of a solid rod golf club shaft 82 is slidably fitted into the upper end of a tubular neck 78. Since the FIG. 10 shaft 82 lacks a step shoulder 80 (of the type disclosed in Desbiolles' FIG. 9 embodiment), Desbiolles uses a "block 84 of thickness d, in a compressible and possibly elastic material" to maintain a "lower end 82a of the handle 82 at a distance d from the base 78a of the neck 78" (col. 5, lines 10-17). In other words, the "block 84" comprises a spacer for spacing the lower end of the shaft 82 from the rigid part 24 of the club head by the desired minimum distance (d). After insertion of the shaft end 82, spaced from the club head part 24 by the spacer block 84, Desbiolles then permanently attaches or permanently connects the shaft end 82 to the neck 78 by gluing. To this point, Desbiolles DOES NOT say that the block 84 is in fact compressed or elastically deformed, nor does Desbiolles ever attribute any connection function or motion limitation function to the block 84.

After permanent connection of the shaft end 82 to the neck 78 by gluing or the like, Desbiolles' block 84 presumably has the capability to undergo some compression as the shaft 82 is force-bent relative to the head 24 to adjust the lie angle. While this may assist in distributing bending forces over the distance (d), it does not and cannot convert Desbiolles' block 84 into a second connection site as claimed by applicant, because the block 84 is not "spaced axially" from the permanently glued joint. To the contrary, in Desbiolles, there is no unconnected, unconstrained free or distal end of the shaft 82 to support; the distal end of the shaft 82 is already attached by gluing.

Applicant notes the examiner's citation of Desbiolles at col. 5, lines 18-25, in an attempt to justify the rejection. However, this cited passage in Desbiolles does NOT support the examiner's position, since the cited passage refers equally to both of Desbiolles' embodiments shown in FIGS. 9 and 10. Since

FIG. 9 lacks any counterpart to the "block 84", the cited passage in Desbiolles is not and cannot be referring to the "block 84". Rather, the quoted language merely reiterates Desbiolles' main theme, namely, that bending forces during lie angle adjustment are distributed over the distance (d).

Applicant notes further the examiner's statement in the Office Action regarding the location of Desbiolles' block 84 "below the top of the socket" (Office Action, p. 5). But this statement also misses the point. Applicant is not claiming the location of the "second connection means" comprising the "resilient anchor member" relative to the "top of the socket". Rather, applicant is claiming the location of the "second connection means" relative to the location of the "thrust flange" and the "thrust seat" and the "first connection means" used to retain these thrust components together. In Desbiolles, if and to the extent that the "block 84" is (albeit mistakenly, as discussed above) construed as a "connection means", it is not located in axially spaced relation to the glued joint.

Moreover, nothing in the Desbiolles reference relates to or pertains in any way to a "temporary" connection designed expressly for "removable" connection in the course of repeated assembly and disassembly of components. Quite the contrary, the entire disclosure of Desbiolles is confined to a permanent (*i.e.*, NOT "temporary" and NOT "removable") connection.

Applicant questions how a person skilled in the art would be expected to excise the "block 84" from the Desbiolles reference, to the exclusion of other aspects of Desbiolles' permanently glued and directly adjoining (*i.e.*, NOT axially spaced apart) connection, for use in modifying the Palmer reference to provide a second connection site that is spaced axially from Palmer's threaded components 41, 42. Based on the Palmer and Desbiolles references alone, and ignoring the teachings and disclosure of applicant, where would the "block 84" be positioned in Palmer, and what function would it perform? Palmer certainly does not disclose and has no need for a predetermined spacing (d) between a free or distal end of his "extension 43" and any other structural element. Neither reference discloses, suggests, or recognizes any need whatsoever for two separate, axially spaced apart connection structures – a concept found only in applicant's Specification and claims.

Accordingly, applicant respectfully contends that the invention recited in claims 1, 3, 6-9 and 14-26 is not obvious in view of any proper combination of the Palmer and Desbiolles references.

Applicant notes further the examiner's reliance upon the cited Parsick (U.S. Patent 5,588,921) reference, viewed in combination with the Palmer and Desbiolles references, to support a rejection of claims 9 and 25 for alleged obviousness. According to the examiner, Parsick "discloses a backstop reaction member ... engageable by a compression nut upon unthreading" (Office Action, p. 7, para. 9). Applicant respectfully suggests that no such teaching is found in fact in the Parsick reference. Instead, to arrive at the rejection, it is first necessary for the examiner to mentally modify and reconstruct the Parsick reference in a manner taught only by applicant's Specification and claims.

More particularly, applicant acknowledges that Parsick has a nut or collar 56 received about a narrowed lower end of a golf club handle for clamping a ring 52 onto a threaded upper end of a golf club shaft 42. Applicant concedes further that a region of Parsick's handle 48 located above the nut or collar 56 has a larger diametric size. However, Parsick does not say that unthreading of the nut or collar 56 from the shaft threads 44 causes an upper margin of the nut or collar 56 to engage and bear against the tapered conical transition zone in order to axially force the components apart. To the contrary, this feature, namely, a "backstop reaction member" that is in fact engaged by a compression nut to force the components apart in the axial direction, is disclosed only by applicant.

A person skilled in the art, looking at Parsick's FIG. 7, would quickly determine that Parsick's nut or collar 56 doesn't even touch the tapered conical transition zone of the handle 48, unless and until the nut or collar 56 is already completely disengaged from the shaft threads 44. This actual structure in Parsick thereby does not and cannot provide applicant's claimed "backstop reaction member" that is engaged "upon unthreading" (emphasis added) of the compression nut, so that the compression nut reacts between the reaction member and the threads to forcibly separate the adapter insert and socket.

Clearly, this "backstop reaction member" as recited in applicant's claims 9 and 25 is not disclosed or suggested by the Parsick reference. Quite the contrary, it is disclosed only by applicant. The examiner has simply, and

improperly, imputed applicant's disclosure into the Parsick reference, to justify a mental modification to Parsick, and then combined the reconstructed Parsick reference with Palmer and Desbiolles to formulate the rejection. This rejection strategy improperly uses applicant's disclosure against itself, and cannot be sustained.

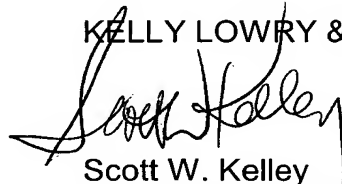
The remaining references of record have been reviewed, but are not believed to include any disclosure or any suggestion that can be used to overcome the above discussed deficiencies of the Palmer, Desbiolles, and Parsick references.

Conclusion

In conclusion, in view of the foregoing revisions and accompanying remarks, applicant respectfully submits that claims 1, 3, 6-9 and 14-26 of this application are in proper form for reconsideration and allowance. A formal Notice of Allowance is believed to be in order, and is therefore respectfully requested.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Scott W. Kelley", is written over the printed name.

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